



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/605,393

09/27/2003

Anthony Lo

2392

7590

10/01/2004

Anthony

Lo

Rm. 7, 7/fl., New City Centre

2, Lei Yue Mun Road, Kwun Tong, Kowloon

Hong Kong,

EXAMINER

ALLEN, DENISE S

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,393

Applicant(s)

LO, ANTHONY

Examiner

Denise S Allen

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United Kingdom on September 25, 2002. It is noted, however, that applicant has not filed a certified copy of the GB 0222244.6 application as required by 35 U.S.C. 119(b).

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "50" (Figure 6) has been used to designate both a light ray and an image item. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference 70 (paragraph 0040 line 10). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior

Art Unit: 2872

version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 2 references 13 and 15; Figure 5 references 40 and 42; Figure 6 references 51, 52, 58, 60, 62, 64, 66, 68, and 74; and Figure 7 references 78, 80, and 82. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1 – 3 are objected to because of the following informalities:

Art Unit: 2872

The limitation “the beam splitter” (claim 1 line 5 and claim 2 line 1) lacks antecedent basis because it has not been previously recited. Suggested correction: replace the limitation with “the mirror beam splitter system”.

The preamble of claim 2 is unclear because it indicates that claim 2 depends on only a portion of claim 1, specifically the mirror beam splitter system. Suggested correction: replace “The beam splitter in claim 1 having” with “The 3D imaging system using reflectors of claim 1, wherein the mirror beam splitter system has”.

The preamble of claim 3 is unclear because it indicates that claim 3 depends on only a portion of claim 1, specifically the lens pair. Suggested correction: replace “The lens pair in claim 1 positioned” with “The 3D imaging system using reflectors of claim 1, wherein the lens pair is positioned”.

The limitation “the two inner mirrors” (claim 3 line 3) lacks antecedent basis because it has not been previously recited. Suggested correction: add the limitation “wherein the mirror beam splitter system comprised two inner mirrors” to claim 1 or 3.

The limitation “the combined light paths” (claim 3 lines 4 – 5) lacks antecedent basis because it has not been previously recited. Suggested correction: replace the limitation with “the dual images”.

The limitation “has an effect on the view finder and light meter measurable to within two aperture stops to that of a single light path” (claim 3 lines 5 – 7) is unclear because it does not indicate what the effect is. Suggested correction: replace the limitation with “produce a measured exposure at the viewfinder and light meter of the single lens reflex camera that is within two

Art Unit: 2872

aperture stops of a measured exposure for a single image". For the purpose of examination, this limitation is interpreted to have the meaning of the suggested correction.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo (US 4,911,530).

Regarding claim 1, Lo teaches a 3D imaging system using reflectors (figures 4 and 9), comprising a mirror beam splitter system (reference 10) having an even number of mirrors (references 11, 12, 13, and 14) and a lens panel having a pair of lenses (references 15 and 16) and an aperture panel with a pair of apertures (see Figure 9 between references 46, 62, and 64); where the beam splitter turns the single light path from a single subject into dual divergent light paths as viewed from two different angles and projects them through the lens pair and then the aperture panel to form dual images with a 3D offset which can be captured on film, electronic recording media or ground glass in a Single Lens Reflex (SLR) camera (column 1 lines 37 – 47). Lo discloses the claimed invention except for the lens pair and the aperture panel being reversed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the lens pair and the aperture panel, since it has been held that a mere reversal of

Art Unit: 2872

working parts of a device involves only routine skill in the art. One would have been motivated to reverse the lens pair and the aperture panel for the purpose of making the lens pair the last element of the 3D imaging system so that the 3D imaging system is enclosed, self-contained, and matches up with the camera (Figure 7 references 10 and 29).

Regarding claim 2, Lo teaches the mirror beam splitter system having an even number of mirrors in a staggered formation in which one group of mirrors is set in front of the other to allow the light paths to crossover to form dual transposed images (Figure 4).

Regarding claim 3, Lo teaches the lens pair is positioned so that the light paths passing through them are sufficiently wide apart to accommodate the two inner mirrors (Figure 4) while close enough together so that the intensity and incident angle of the combined light paths has an effect on the viewfinder and light meter measurable to within two aperture stops to that of a single light path (column 5 lines 1 – 47).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (571) 272-2305. The examiner can normally be reached on Monday - Friday, 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

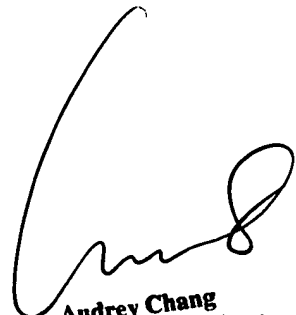
Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Denise S Allen
Examiner
Art Unit 2872



dsa



Audrey Chang
Primary Examiner
Technology Center 2800